

REMARKS

Applicant submits an Excess Claim Fee Payment Letter for (1) one additional independent claim.

Claims 1-20 are all the claims presently pending in the application. Claims 1-3 have been amended to more particularly define the invention. Claims 8-20 have been added to claim additional features of the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Applicant gratefully acknowledges that claim 7 is allowed. However, Applicant respectfully submits that all of the claims are allowable.

Claims 1-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (U.S. Patent No. 5,535,641) in view of legal precedence.

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined by claim 1) is directed to a rocker arm for opening and closing a valve. The rocker arm includes a body and a valve engaging portion provided at the body. The valve engaging portion engages the valve and includes a pair of valve guide walls opposed to each other, and a pair of excess thickness portions formed on the pair of valve guide walls.

Conventional rocker arms are manufactured by press forming. A metallic sheet is press formed using an integral die having a predetermined shape. In the case of forming a valve engaging portion in the rocker arm using an integral die, there is the possibility that stress concentration is caused in the corner angle portion when the die is given a force, which results in the formation of cracks in the die. To alleviate this problem, divided dies have been used to form the valve engaging portion of the rocker arm. When using divided dies,

however, there is a tendency that the dies will slip relative to one another. Therefore, when the valve guide walls and the connecting wall of the valve engaging portion are formed, metallic material may plastically flow into a gap between the two dies forming a molding flash. The molding flash cannot be removed during the finishing process of the rocker arm. The result is that the molding flash is separated from the body of the rocker arm during use of the rocker arm and attached to parts arranged in the periphery.

The invention of exemplary claim 1, on the other hand, provides a rocker arm including a body and a valve engaging portion provided at the body. The valve engaging portion engages the valve and includes a pair of valve guide walls opposed to each other, and a pair of excess thickness portions formed on the pair of valve guide walls (e.g., see Application at page 4, lines 7-22). This allows the claimed invention to provide a rocker arm in which the molding flash is not detached from the rocker arm and does not affect peripheral parts (see Application at page 3, line 25 through page 4, line 2).

II. THE PRIOR ART REFERENCE

The Examiner alleges that Uchida et al., in view of legal precedence, teaches the claimed invention of claims 1-6. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Uchida in view of legal precedence.

That is, Uchida does not teach or suggest “*excess thickness portions formed on the pair of valve guide walls*” as recited in claim 1.

As noted above, unlike conventional rocker arms, the invention of claim 1 provides a rocker arm including a body and a valve engaging portion provided at the body. The valve engaging portion engages the valve and includes a pair of valve guide walls, opposed to each other, each guide wall having a first end and a second end, a connecting wall connecting the pair of valve guide walls with each other, and a pair of excess thickness portions formed on the pair of valve guide walls (e.g., see Application at page 4, lines 7-22). This allows the claimed invention to provide a rocker arm in which the molding flash is not detached from the rocker arm and does not affect peripheral parts (see Application at page 3, line 25 through

page 4, line 2).

Uchida discloses a side wall portion having two different thicknesses T1 and T2, which are arranged in a longitudinal direction of the rocker arm. Especially, contrary to the exemplary aspects of the present invention a thickness changing portion is formed at a pivot engaging portion, and there is no change in the thickness at a sidewall of a valve engaging portion.

In the present invention, the side wall having the excess thickness portion is at a valve system side (see Application at Figure 1). Contrary to this, the side wall of Uchida is formed by bending it upward which is opposed to the valve system.

Further, the present invention and Uchida are directed to completely different objects. An object of the present invention is to prevent the molding flash from being detached from the rocker by forming the excess thickness portion. Contrary to this, the object of Uchida is to secure the flat portions provided at each side of the pivot engaging portion without increasing a width dimension of the rocker arm.

Clearly, the novel features of the claimed invention are not taught or suggested by Uchida. Indeed, the Examiner attempts to rely on Figures 1 and 3 of Uchida to support his allegations. The Examiner is clearly incorrect.

Uchida merely discloses a rocker arm having a valve engaging portion. The valve engaging portion includes a pair of valve guide arms and a connecting wall for connecting the pair of valve guide arms.

Nowhere, however, in these Figures (nor anywhere else for that matter) does Uchida teach or suggest a rocker arm including a valve engaging portion having a pair of excess thickness portions formed on the pair of valve guide walls. Uchida merely teaches a difference in width between the walls of the valve engaging portion and the pivot-side portion.

Specifically, Uchida discloses that the pivot-side portion (6) has a pair of opposed side walls (3). The side walls (3) of the pivot-side portion (6) have a first portion having a first width (T1) and a second portion having a second width (T2). However, the guide walls of the valve engaging portion (7) do not vary in thickness (see Figure 1 of Uchida).

Therefore, Applicant submits that there are elements of the claimed invention that are not taught or suggest by Uchida. Therefore, the Examiner is respectfully requested to withdraw this rejection.

III. NEW CLAIMS

New claims 8-20 have been added to provide more varied protection for the claimed invention and to claim additional features of the invention. These claims are independently patentable because of the novel features recited therein.

Applicant respectfully submits that new claims 8-20 are patentable over any combination of the applied references at least for analogous reasons to those set forth above with respect to claims 1-7.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-20, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

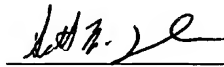
Serial No. 10/602,775
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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